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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,718	12/27/2001	Nobuatsu Sasanuma	35.C16074	2009

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EXAMINER	
BAKER, CHARLOTTE M	

ART UNIT	PAPER NUMBER
2626	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/026,718	SASANUMA ET AL.	
	Examiner	Art Unit	
	Charlotte M. Baker	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05/10/02; 04/02/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

IDS cont. 02/03/05

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: on p. 7, ln. 13, replace "(CIELA space)" with --(CIELAB space)--; on p. 7, ln. 15, replace "luminocity" with --luminosity--; on p. 15, ln. 23 and 26 and p. 20, ln. 22, replace "therefor" with --therefore--.

Appropriate correction is required.

Claim Objections

3. The following is a quotation of 37 C.F.R. 1.75 (d)(1):

> The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

4. Claims 1-2, 4, 6-9, 11, and 13-15 are objected to because of the following informalities: claim 1 "the image density" lacks antecedent basis; claim 2 "the density scale" lacks antecedent basis; claim 4 "the consumption amount" and "the image formation" lack antecedent basis; claim 6 "the characteristics" lacks antecedent basis; claim 7 "the remaining amount" lacks antecedent basis; claim 8 "the image density" lacks antecedent basis; claim 9 "the density scale" lacks antecedent basis; claim 11 "the consumption amount" and "the image formation" lack antecedent basis; claim 13 "the characteristics" lacks antecedent basis; claim 14 "the remaining amount" and "the execution" lack antecedent basis; claim 15 "the number of gradation levels per pixel" and "the consumption amount" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyama (5,040,023).

Regarding claim 1: The structural elements of apparatus claim 8 perform all of the steps of method claim 1. Thus, claim 1 is rejected for the same reasons discussed in the rejection of claim 8.

Regarding claim 2: Yokoyama satisfies all the elements of claim 1. The structural elements of apparatus claim 9 perform all of the steps of method claim 2. Thus, claim 2 is rejected for the same reasons discussed in the rejection of claim 9.

Regarding claim 3: Yokoyama satisfies all the elements of claim 1. The structural elements of apparatus claim 10 perform all of the steps of method claim 3. Thus, claim 3 is rejected for the same reasons discussed in the rejection of claim 10.

Regarding claim 4: Yokoyama satisfies all the elements of claim 1. The structural elements of apparatus claim 11 perform all of the steps of method claim 4. Thus, claim 4 is rejected for the same reasons discussed in the rejection of claim 11.

Regarding claim 5: Yokoyama satisfies all the elements of claim 4. The structural elements of apparatus claim 12 perform all of the steps of method claim 5. Thus, claim 5 is rejected for the same reasons discussed in the rejection of claim 12.

Regarding claim 6: Yokoyama satisfies all the elements of claim 1. The structural elements of apparatus claim 13 perform all of the steps of method claim 6. Thus, claim 6 is rejected for the same reasons discussed in the rejection of claim 13.

Regarding claim 7: Yokoyama satisfies all the elements of claim 4. The structural elements of apparatus claim 14 perform all of the steps of method claim 7. Thus, claim 7 is rejected for the same reasons discussed in the rejection of claim 14.

Regarding claim 8: Yokoyama discloses input means for entering image data (Fig. 1, optical system 10); conversion means (Fig. 1, optical system 10 to photosensitive drum 1) for converting the entered image data into image data having a linear relationship with the image density (col. 6, ln. 9-15); and calculation means (Fig. 4, CPU 200) for calculating an image ratio (col. 9, ln. 5-9), based on the number of pixels (density) in which said coloring material (toner) is deposited onto said print medium (col. 6, ln. 37-38) based on the image data converted in said conversion means (Fig. 1, optical system 10 to photosensitive drum 1), the number of pixels (density) corresponding to the size of said print medium (Table 1 and col. 10, ln. 1-5), and the number of gradation levels per pixel (col. 11, ln. 31-36).

Regarding claim 9: Yokoyama satisfies all the elements of claim 8. Yokoyama further discloses wherein said conversion means (Fig. 1, photosensitive drum 1) executes conversion to image data normalized with the density scale in the pixel unit (Fig. 6 and col. 11, ln. 21-25).

Regarding claim 10: Yokoyama satisfies all the elements of claim 9. Yokoyama further discloses wherein said calculation means (Fig. 4, CPU 200) calculates said image ratio (col. 9, ln. 5-9) by dividing the number of pixels of deposition to said print medium by a value obtained by multiplying the total number of pixels corresponding to the size of said print medium with said number of gradation levels (Fig. 10 and col. 12, ln. 31-63).

Regarding claim 11: Yokoyama satisfies all the elements of claim 8. Yokoyama further discloses a second calculation means (Fig. 4, CPU 200) for calculating the consumption amount of the coloring material consumed in the image formation (Fig. 11 and col. 13, ln. 44 through ln. 2), based on said image ratio (col. 9, ln. 5-9).

Regarding claim 12: Yokoyama satisfies all the elements of claim 11. Yokoyama further discloses wherein said calculation means (Fig. 4, CPU 200) calculates the consumption amount of coloring material by multiplying the consumption amount (toner consumption) of the coloring material (toner) in a unit area in a solid image formation, said image ratio and the size of the recording sheet (Fig. 6 and col. 11, ln. 31-36)) (Fig. 10 and col. 12, ln. 31-63) (Fig. 11 and col. 13, ln. 44 through ln. 2).

Regarding claim 13: Yokoyama satisfies all the elements of claim 8. Yokoyama further discloses wherein said input means (Fig. 1, optical system 10) enters image data matching the characteristics of said apparatus (Fig. 1, copying machine), and the apparatus (Fig. 1, copying machine) further comprises image forming means (Fig. 1, photosensitive drum 1) for executing image formation based on the image data (latent image) matching the characteristics of said apparatus (Fig. 1, copying machine).

Regarding claim 14: Yokoyama satisfies all the elements of claim 11. Yokoyama further discloses accumulation means (Fig. 1, CPU 200 and Fig. 11, and col. 13, ln. 44 through ln. 2) for accumulating the consumption amount (toner consumption) of said coloring material (toner); detection means (Fig. 7, magnetic sensor 15) for detecting the remaining amount of said coloring material (toner) (col. 14, ln. 6-36), from the accumulated value (toner consumption) accumulated in said accumulation means (Fig. 1, CPU 200) and an initial amount (reference toner concentration, col. 14, ln. 6-10) of said coloring material (toner); discrimination means (Fig. 12, toner replenishment flow chart) for discriminating whether an instructed image formation can be executed with the remaining amount (toner concentration and col. 14, ln. 6-10) detected in said detection means (Fig. 7, magnetic sensor 15); and warning means (Fig. 7, scan control processor 202 and col. 11, 49-56) for warning in case said discrimination means (Fig. 12, toner replenishment flow chart) identifies that the execution is not possible (Fig. 7, control signal input and output of CPU 200 to SCP 202).

Regarding claim 15: Yokoyama discloses conversion means (Fig. 1, optical system 10 to photosensitive drum 1) for converting the image data from said supplying apparatus (Fig. 1, optical system 10) to image data having a linear relationship with the image density (col. 6, ln. 9-15); first calculation means (Fig. 4, CPU 200) for calculating an image ratio (col. 9, ln. 5-9) based on the number of pixels (density) in which said coloring material (toner) is deposited onto said print medium (col. 6, ln. 37-38) based on the image data converted in said conversion means (Fig. 1, optical system 10 to photosensitive drum 1), the number of pixels (density) corresponding to the size of said print medium (Table 1 and col. 10, ln. 1-5), and the number of gradation levels per pixel (col. 11, ln. 31-36); and second calculation means (Fig. 4, CPU 200)

for calculating the consumption amount (toner consumption) of said coloring material (toner) (Fig. 11 and col. 13, ln. 44 through ln. 2) based on the image ratio calculated by said first calculation means (Fig. 4, CPU 200) (col. 9, ln. 5-9).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charlotte M. Baker whose telephone number is 571-272-7459. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams can be reached on 571-272-7471. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMB

KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER